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<u>L4</u>	I2 same L3	1	<u>L4</u>
<u>L3</u>	(nox) or (nadh oxidase)	31899	<u>L3</u>
<u>L2</u>	(age related) or (aging related) or (ageing related)	3220	<u>L2</u>
<u>L1</u>	ar nox or ar-nox	1	<u>L1</u>

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NEWS 11 Jun 10 PCTFULL has been reloaded
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NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
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NEWS 33 Nov 25 More calculated properties added to REGISTRY
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NEWS 35 Dec 04 CSA files on STN
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NEWS 37 Dec 17 TOXCENTER enhanced with additional content
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E1	1	AR BINDER GS/CN
E2	1	AR FILM/CN
E3	0 -->	AR NOX/CN
E4	1	AR RESIN AR 24/CN
E5	1	AR',AR'''-BI (BENZENESULFONANILIDE), N,N'-BIS(3-METHYL-4-(TOL YL)-2-BUTENYL)-/CN
E6	1	AR',AR'''-BI (BENZENESULFONANILIDE), N,N'-BIS(3-METHYL-4-PHEN

YL-2-BUTENYL) -/CN
 E7 1 AR',AR'''-BICHALCONE/CN
 E8 1 AR'-ACETOXYBIPHENYLCARBOXYLIC ACID/CN
 E9 1 AR'-PHENOXYACETOPHENONE/CN
 E10 1 AR,.ALPHA.-DIMETHYLSTYRENE-MALEIC ANHYDRIDE-STYRENE
 POLYMER/

CN
 E11 1 AR,1'-BI-1H-INDENE,
 2',3'-DIHYDRO-2,2',2',3,4,4',7,7'-OCTAME
 THYL-/CN
 E12 1 AR,1'-BIPYRIDINIUM, CHLORIDE/CN

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 COST IN U.S. DOLLARS

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ENTRY	SESSION
0.38	0.59

FULL ESTIMATED COST

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=> s ar-nox or ar nox
 L1 4 AR-NOX OR AR NOX

=> s (ar-nox) or (ar nox)
 L2 4 (AR-NOX) OR (AR NOX)

=> d ibib abs

L2 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:706975 CAPLUS

DOCUMENT NUMBER: 133:276372

TITLE: Methods for identifying agents that inhibit serum
 aging factors (NADH oxidase) and uses and

compositions

thereof

INVENTOR(S): Morre, Dorothy M.; Morre, D. James

PATENT ASSIGNEE(S): Purdue Research Foundation, USA

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2000057871	A2	20001005	WO 2000-US8433	20000329

WO 2000057871 A3 20020131

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW,
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-126894P P 19990330

AB The invention described here relates to methods for prevention or
treatment of disorders caused by oxidative damage resulting from
generation of reactive oxygen species by an aging-specific isoform of

NADH

oxidase (AR-NOX). The invention encompasses methods
of assaying, screening, and identifying agents that inhibit AR-
NOX, as well as methods using ubiquinone to inhibit the ability of
AR-NOX to generate reactive oxygen species. These
agents may be formulated into pharmaceutical compns. in the prevention

and

treatment of disorders caused by oxidative damage, such as cancer,
diabetes, parkinsonism, atherosclerosis, cardiotoxicity, nephrotoxicity,
autoimmune diseases, etc.

=> d 2 ibib abs

L2 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:66687 CAPLUS

DOCUMENT NUMBER: 130:185169

TITLE: Shielding gases are the key to innovations in welding

AUTHOR(S): Irving, Bob

CORPORATE SOURCE: USA

SOURCE: Welding Journal (Miami) (1999), 78(1), 37-41

CODEN: WEJUA3; ISSN: 0043-2296

PUBLISHER: American Welding Society

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 2 refs. on the use of shielding gasses (CO₂, Ar,
NO_x, He, H) for various welding processes.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

=> d 3 ibib abs

L2 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1978:65254 CAPLUS

DOCUMENT NUMBER: 88:65254

TITLE: Separation of radioactive noble gases in a nuclear
fuel reprocessing plant

AUTHOR(S): Laser, M.

CORPORATE SOURCE: KFA, Juelich, Juelich, Fed. Rep. Ger.

SOURCE: Jahresbericht - Kernforschungsanlage Juelich (1977)
33-8

CODEN: KJNJAT; ISSN: 0341-8790

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The CRYOSEP process is used when the effluent contains 85Kr, 129I, 3H, Xe, O, N, Ar, NOx, and traces of other gases. Mist and 129I are removed by filters. H is added and NOx and O are catalytically converted to H2O and N. 3H is removed by intensive drying, and the gas stream contg. N, Ar, Xe, and 85Kr is liquefied. 85Kr is sepd. by distn. and stored in flasks under pressure. The AKUT process is used where the gases also contain CO and CO2 from the burning of coke. The gas is cleansed of dust and aerosol by an electrofilter. O is added to burn CO to CO2. The gas mixt., contg. 99% CO2, is compressed at room temp. and rectified. The 85Kr fraction is taken off the top. The CO2 fraction is free of 85Kr, but contains 3H and 129I, which are removed in an absorption bed, after which CO2 is released to the atm. The 85Kr is compressed and stored. Heat generation is a problem in 85Kr storage; .apprx.240 W for a tank contg. 2000 Ci of 85Kr. Air-cooled 85Kr tanks are .apprx.50.degree. above the surroundings.

=> d 4 ibib abs

L2 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1976:64720 CAPLUS

DOCUMENT NUMBER: 84:64720

TITLE: Reduction of nitrogen oxides (NOx) in the waste gas from sinter plants

AUTHOR(S): Suzuki, Gyoichi; Ando, Ryo; Yoshikoshi, Hideyuki; Yamaoka, Yojiro; Nagaoka, Seishiro

CORPORATE SOURCE: Tech. Res. Cent., Nippon Kokan K. K., Kawasaki, Japan

SOURCE: Tetsu to Hagane (1975), 61(13), 2775-83

CODEN: TEHAA2; ISSN: 0021-1575

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The thermal NOx [11104-93-1] in waste gas formed in the sintering process was calcd. by a simulation model. The result showed that the amt. of thermal NOx in waste gas was .apprx.0.1% of that from the actual sintering

process. To check this result exptl., the sintering test was carried out exchanging the portion of N in air to Ar, NOx in waste gas originated mainly from the N in coke. The N in ore was converted to NOx, however, the proportion of it was .apprx.10% of total N in the sinter

mixt., so that the dinitration of coke was necessary for the redn. of NOx from the sinter plant. For denitration of coke, the high temp. reheating of coke was used, and the ratio of denitration increased with rising temp.

For example, the N in coke decreased from 0.9 to .apprx.0.2% by reheating at 1830.degree. for 1 hr. In a sintering test using this low-N coke, the amt. of NOx formed could be diminished to .apprx.30%.

=> s age related or aging related or ageing related

L3 98226 AGE RELATED OR AGING RELATED OR AGEING RELATED

=> s (nadh oxidase) or (nox)

L4 59196 (NADH OXIDASE) OR (NOX)

=> s l3(s)l4

L5 25 L3(S) L4

=> dup rem 15
PROCESSING COMPLETED FOR L5
L6 14 DUP REM L5 (11 DUPLICATES REMOVED)

=> d ibib abs

L6 ANSWER 1 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:370233 BIOSIS
DOCUMENT NUMBER: PREV200200370233
TITLE: A superoxide-generating, **aging-related**
cell surface **NADH oxidase (NOX**
protein) expressed in MCF-10A mammary epithelia.
AUTHOR(S): Morre, Dorothy M. (1); Chueh, Pin-Ju; Morre, D. James
CORPORATE SOURCE: (1) Foods and Nutrition, Purdue University, 1264 State,
West Lafayette, IN, 47907 USA
SOURCE: FASEB Journal, (March 22, 2002) Vol. 16, No. 5, pp. A996.
<http://www.fasebj.org/>. print.
Meeting Info.: Annual Meeting of Professional Research
Scientists on Experimental Biology New Orleans, Louisiana,
USA April 20-24, 2002
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The protein belongs to a unique family of cell surface (plasma
membrane)-associated hydroquinone (**NADH**) **oxidase** with
protein disulfide-thiol interchange activity designated **NOX**
proteins. One defining characteristics is a ca. 12-min alternation of the
two activities (hydroquinone or NADH oxidation and protein
disulfide-thiol
interchange) to generate activity oscillations with a period length of
ca. 24 min. A **NOX** protein of transfusion buffy coats and sera of
aged individuals (70-100 y) generates superoxide with a period length of
25 min. The activity, measured by reduction of cytochrome c, is reduced
or absent from sera of younger individuals (20-40 y). MCF-10A mammary
epithelial cells normally lack this **aging-related**
activity but the activity is induced and stably expressed in cells
stressed by calcium phosphate transfection. The mammary cells induced to
express the **aging-related NOX** protein
provide a model whereby biochemical and phenotypic changes related to its
expression can be assessed.

=> d 2 ibib abs

L6 ANSWER 2 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
1
ACCESSION NUMBER: 2001:229595 BIOSIS
DOCUMENT NUMBER: PREV200100229595
TITLE: Enhanced superoxide anion formation in vascular tissues
from spontaneously hypertensive and desoxycorticosterone
acetate-salt hypertensive rats.
AUTHOR(S): Wu, Rong; Millette, Esther; Wu, Lingyun; de Champlain,
Jacques (1)
CORPORATE SOURCE: (1) Department of Physiology, Faculty of Medicine,
University of Montreal, Succursale Centre-ville, Montreal,
Quebec, H3C 3J7: grsna@ere.umontreal.ca Canada
SOURCE: Journal of Hypertension, (April, 2001) Vol. 19, No. 4, pp.
741-748. print.

ISSN: 0263-6352.

DOCUMENT TYPE: Article

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Objectives To investigate the basal and NADH-stimulated superoxide (cntdot

O2-) production and inactivation by Cu/Zn superoxide dismutase (SOD) in aorta from spontaneously hypertensive rats (SHR) and from desoxycorticosterone acetate (DOCA)-salt hypertensive (DOCA-HT) rats. Methods Tissue cntdot O2- levels were estimated with the lucigenin-enhanced chemiluminescence method in aorta and cultured smooth muscle cells (SMCs) from SHR and in aorta from DOCA-HT rats treated for 4 weeks. Results The basal aortic cntdot O2- generation was increased by

135

and 100%, and the NADH stimulated cntdot O2- production was also increased

37 and 22% in SHR and in DOCA-HT rats compared to their normotensive controls, respectively. Although no difference existed in blood pressure as well as in basal and in NADH stimulated cntdot O2- production between Wistar-Kyoto (WKY) rats and SHR rats at age of 6 weeks, O2- production

and

blood pressure increased concomitantly in SHR aged 9 and 12 weeks. Basal and NADH-stimulated cntdot O2- production, in cultured SMCs, was also 80 and 64% higher, respectively, in SHR compared to WKY rats. The **NADH oxidase** activity was found to be increased in aorta from both SHR and DOCA-HT rats but SOD activity was reduced only in aorta from DOCA-HT rats. Conclusions An enhanced cntdot O2- formation resulting from an increased **NADH oxidase** activity was found in aorta from SHR and DOCA-HT rats. Cultured arterial SMCs from SHR also generated excessive cntdot O2- formation under basal and stimulated conditions. The **age-related** increase in vascular cntdot O2- formation in association with the rise in blood pressure in

SHR

suggests that the oxidative stress might contribute to the development of hypertension. **NADH oxidase** activity was greater in aorta of both hypertension models, but a decrease of Cu/Zn SOD activity could also contribute to the high level of aortic cntdot O2- in DOCA-HT rats.

=> d 3 ibib abs

L6 ANSWER 3 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2001:276685 BIOSIS

DOCUMENT NUMBER: PREV200100276685

TITLE: **Aging-related** cytochrome C reduction in sera of aged individuals is due to a superoxide-generating **NOX** protein.

AUTHOR(S): Claussen, Carrie (1); Guo, Fenghui (1); Morre, D. James (1); Morre, Dorothy M. (1)

CORPORATE SOURCE: (1) Purdue University, W. Lafayette, IN, 47907 USA

SOURCE: FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A277. print.

Meeting Info.: Annual Meeting of the Federation of

American

Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001

ISSN: 0892-6638.

DOCUMENT TYPE: Conference

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Sera from aged individuals (80-100 y) uniquely reduce cytochrome c compared to sera from young individuals (20-40 y). **Aging-related** cytochrome c reduction (AR-CCR) is seen also with the cell surface of lymphocytes from aged individuals. Activity is inhibited by both superoxide dismutase (SOD) and coenzyme Q. The AR-CCR activity is resistant to heat and to proteinase K, properties of other **NOX** (**NADH oxidase**) proteins under investigation in our laboratories. The AR-CCR activity is correlated with band presence on Western blots using a peptide antibody to the conserved adenine nucleotide binding region of the **NOX** protein C terminus. The AR-CCR activity oscillates with a period length of 24 min as is characteristic of **NOX** proteins. The activity in serum is not due to pre-existing superoxides or to cytochrome c reduction by NADH-cytochrome c reductase. A mechanism to explain the **NOX**-associated AR-CCR will be presented.

=> d 4 ibib abs

L6 ANSWER 4 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:177753 BIOSIS
DOCUMENT NUMBER: PREV200200177753
TITLE: Spontaneous expression of an **aging-related NOX** isoform in cold-stored human lymphocytes (buffy coats).
AUTHOR(S): Morre, Dorothy M. (1); Huang, Roger (1); Carnahan, Brett (1); Wu, Lian-Ying (1); Layman, Sara; Morre, D. James
CORPORATE SOURCE: (1) Department of Foods and Nutrition, Purdue University, G-1E Stone Hall, West Lafayette, IN, 47907 USA
SOURCE: Molecular Biology of the Cell, (Nov, 2001) Vol. 12, No. Supplement, pp. 243a. <http://www.molbiolcell.org/>. print. Meeting Info.: 41st Annual Meeting of the American Society for Cell Biology Washington DC, USA December 08-12, 2001 ISSN: 1059-1524.
DOCUMENT TYPE: Conference
LANGUAGE: English

=> d 5 ibib abs

L6 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:706975 CAPLUS
DOCUMENT NUMBER: 133:276372
TITLE: Methods for identifying agents that inhibit serum aging factors (NADH oxidase) and uses and compositions thereof
INVENTOR(S): Morre, Dorothy M.; Morre, D. James
PATENT ASSIGNEE(S): Purdue Research Foundation, USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057871	A2	20001005	WO 2000-US8433	20000329
WO 2000057871	A3	20020131		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-126894P P 19990330

AB The invention described here relates to methods for prevention or treatment of disorders caused by oxidative damage resulting from generation of reactive oxygen species by an aging-specific isoform of NADH

oxidase (AR-NOX). The invention encompasses methods of assaying, screening, and identifying agents that inhibit AR-NOX, as well as methods using ubiquinone to inhibit the ability of AR-NOX to generate reactive oxygen species. These agents may be formulated into pharmaceutical compns. in the prevention and treatment of disorders caused by oxidative damage, such as cancer, diabetes, parkinsonism, atherosclerosis, cardiotoxicity, nephrotoxicity, autoimmune diseases, etc.

=> d 6 ibib abs

L6 ANSWER 6 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
2

ACCESSION NUMBER: 2001:55274 BIOSIS

DOCUMENT NUMBER: PREV200100055274

TITLE: Age-related alterations of nitric oxide production in the brains of seizure-susceptible EL mice.

AUTHOR(S): Nagatomo, Itsugi (1); Akasaki, Yasuaki; Uchida, Masahiro; Tominaga, Masataka; Hashiguchi, Wataru; Kuchiiwa, Satoshi; Nakagawa, Shiro; Takigawa, Morikuni

CORPORATE SOURCE: (1) Department of Neuropsychiatry, Faculty of Medicine, Kagoshima University, 8-35-1, Sakuragaoka, Kagoshima, 890-8520: nagatomo@med4.kufm.kagoshima-u.ac.jp Japan

SOURCE: Brain Research Bulletin, (October, 2000) Vol. 53, No. 3, pp. 301-306. print.
ISSN: 0361-9230.

DOCUMENT TYPE: Article

LANGUAGE: English

SUMMARY LANGUAGE: English

AB We evaluated **age-related** changes in nitric oxide (NO) production in the brains of EL mice, a strain highly susceptible to seizures. A group of EL(s) mice were tossed up weekly to induce convulsive seizures, while in a nonstimulated EL(ns) group induction of convulsive seizures was avoided. Brain levels of nitrite plus nitrate (**NOx**) in EL(ns) mice were significantly higher than in nonstimulated mice at 10 days, and also higher than levels at 15 and 50 weeks in either EL(s) or EL(ns) mice. A significantly higher number of NO-producing cells were demonstrated in the hippocampus and parietal cortex by staining for nicotinamide adenine dinucleotide phosphate (NADPH)-diaphorase in EL(s) mice at the ages of 15 and 50 weeks than in EL(ns) mice at the age of 6 weeks. In EL(ns) mice, significantly fewer neurons showed NADPH-diaphorase

50 staining in the hippocampus, striatum and parietal cortex at the age of weeks than at 6 weeks. The present results suggest that whole-brain NOx levels in EL(ns) and EL(s) mice and numbers of NADPH-diaphorase-positive neurons in EL(ns) mice decreased with aging, while increasing of numbers of such neurons in EL(s) mice were assumed to develop in compensation for reduction in whole-brain NOx levels.

=> d 7 ibib abs

L6 ANSWER 7 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:76914 BIOSIS
DOCUMENT NUMBER: PREV200100076914
TITLE: Age related alterations in nitric oxide signaling following stimulation of striatal NMDA receptors in F344 rat.
AUTHOR(S): Spangler, E. L. (1); Ingram, D. K.; Yu, S.; Kametani, H.
CORPORATE SOURCE: (1) NIA, Baltimore, MD USA
SOURCE: Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-194.9. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience New Orleans, LA, USA November 04-09, 2000
Society for Neuroscience
. ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Striatal neuronal nitric oxide synthase (nNOS) has been observed to decline with age in the F344 rat, as measured by NADPH staining (Kuo et al., 1997).
We report here on nitric oxide signaling in striatum, putatively as a retrograde messenger on the NMDA receptor, following infusion of N-methyl-D-aspartic acid (NMDA). In vivo microdialysis and a NOx analyzer (Eicom, Japan) were used to measure the oxidative by-products of NO metabolism, nitrite and nitrate, in F344 rats 3-4 and 24-25 mo old that had cannulae bilaterally implanted into striatum (AP +0.7, ML 3.2, DV -4.5). At lower doses of NMDA stimulation (0.25, 1.0 and 10 mM; n=5/group) no age differences emerged in either nitrite or nitrate measurements. In a second study 3-4 and 24-25 mo old rats were stimulated with either 0.3 or 30 mM NMDA (n=6/group). No age differences emerged at 0.3 mM but nitrite and nitrate increased significantly following 30 mM NMDA in aged but not young rats. In another study following i.p injection of Nw-Nitro-L-Arginine (8 mg/kg) a decline below baseline in nitrite and nitrate was more pronounced in young than in aged rats, indicative of an age-related loss of nNOS in striatum that was previously observed in NADPH staining. Our results suggest that other NOS isoforms (i.e., eNOS, iNOS) may account for an age-related increase in striatal nitrite and nitrate observed following 30mM NMDA stimulation. Age-related changes in effectiveness of an NMDA redox site may also be involved.

=> d 8 ibib abs

L6 ANSWER 8 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC. DUPLICATE
3

ACCESSION NUMBER: 1999:371862 BIOSIS
DOCUMENT NUMBER: PREV199900371862
TITLE: Amniotic fluid nitric oxide metabolites, cyclic guanosine 3',5' monophosphate and dimethylarginine in alloimmunized pregnancies.
AUTHOR(S): Egberts, Johannes (1); van den Bosch, Nel; Soederhuizen, Pim
CORPORATE SOURCE: (1) Department of Obstetrics and Gynecology, Leiden University Medical Center, Building 1 {a} Department of Obstetrics and Gynecology, Leiden University Medical Center, Building 1 Netherlands
SOURCE: European Journal of Obstetrics & Gynecology and Reproductive Biology, (Aug., 1999) Vol. 85, No. 2, pp. 209-214.
ISSN: 0301-2115.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Objective: To determine the relationship between gestational age or the Liley index (the severity of fetal hemolysis) and the amniotic fluid total

nitrite (**NOx**), cyclic guanosine 3',5' monophosphate (cGMP) and dimethylarginine (DMA) concentrations. We hypothesized that the concentrations of these components change because of fetal growth or adaptation to fetal anemia. Study Design: Amniotic fluids (n=64) were obtained between 23 and 37 weeks from fifty-three patients at risk for alloimmunization. Amniotic fluids from the pregnancies with a Liley index=1 were considered as controls (n=17). Creatinine (C, μ Mol) was determined with the Jaffe reagent, nitrite (**NOx**, μ Mol) with the Griess reagent, cGMP (nMol) by an enzyme immunoassay and DMA (μ Mol) after

HPLC. Multiple regression analysis was used for separating the effects of growth and the estimated degree of anemia. Results: The concentration of **NOx**, cGMP and DMA was not related to the Liley index or whether or not the fetuses needed blood transfusions. The concentrations of creatinine (C), **NOx** and cGMP increased during pregnancy (in weeks;W) ($C = -69.2 + 6.28W$; $r^2 = 0.532$; $P < 0.0001$, $NOx = -17.6 + 1.29W$; $r^2 = 0.106$; $P = 0.01$, $cGMP = -20.9 + 1.05W$; $r^2 = 0.414$; $P < 0.0001$). The DMA concentration (3.8 ± 0.8 (SD)) and the **NOx**/creatinine ratio (181 ± 110 mM/M) did not change with gestational age. The cGMP/creatinine ratios (μ M/M) increased ($cGMP/C = -41.8 + 4.31W$; $r^2 = 0.134$; $P = 0.007$) whereas the DMA/creatinine ratio (mM/M) declined during pregnancy ($DMA/C = 73.1 - 1.34W$; $r^2 = 0.278$; $P = 0.0002$). Consequently, the **NOx**/DMA and cGMP/DMA ratios increased ($NOx/DMA = -6.96 + 0.43W$; $r^2 = 0.105$; $P = 0.02$, $cGMP/DMA = -5.9 + 0.29W$; $r^2 = 0.391$; $P < 0.0001$). Conclusions: The concentrations in amniotic fluid of cGMP and **NOx**, but not of DMA increase during gestation. The cGMP/creatinine ratio increases also whereas that of DMA decreases. The changes in products of the NO-cGMP pathway are independent of mild to moderate fetal hemolysis and may

result

from fetal growth as well as from reduced inhibition of NO synthase by DMA. Gestational age related effects should be taken into account when analyzing nitric oxide metabolites in amniotic fluids.

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L6 ANSWER 9 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
4

ACCESSION NUMBER: 1999:341730 BIOSIS

DOCUMENT NUMBER: PREV199900341730
TITLE: A multifunctional hydroquinone oxidase of the external cell surface and sera.
AUTHOR(S): Morre, D. James (1); Pogue, Rhea; Morre, Dorothy M.
CORPORATE SOURCE: (1) Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, 1333 Hansen Life Sciences Research Building, West Lafayette, IN, 47907-1333 USA
SOURCE: Biofactors, (1999) Vol. 9, No. 2-4, pp. 179-187.
ISSN: 0951-6433.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB A multifunctional cell surface protein with **NADH oxidase (NOX)** activity and capable of oxidizing hydroquinones is located at the exterior of the cell and is shed in soluble form into sera. The oxidase appears to function as a terminal oxidase of a trans plasma membrane electron transport chain consisting of a NAD(P)H-ubiquinone reductase at the cytosolic membrane surface, possibly a b-type cytochrome, ubiquinone and the oxidase. Hyperactivity or conditions that interrupt ordered $2H^+ + 2e^-$ transport from NAD(P)H or hydroquinone to molecular oxygen and other acceptors at the external cell surface may result in the generation of superoxide. The latter may serve to propagate **aging-related** redox changes both to adjacent cells and circulating blood components. A circulating **NOX** activity form associated with aging and the reduction of cytochrome c by sera of aged patients that is partially inhibited by ubiquinone are described.

=> d 10 ibib abs

L6 ANSWER 10 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:27695 BIOSIS
DOCUMENT NUMBER: PREV200000027695
TITLE: An **aging-related NOX** protein.
AUTHOR(S): Guo, Fenghui (1); Pogue, Rhea (1); Morre, D. James (1); Morre, Dorothy M. (1)
CORPORATE SOURCE: (1) Purdue University, West Lafayette, IN, 47907 USA
SOURCE: Molecular Biology of the Cell, (Nov., 1999) Vol. 10, No. SUPPL., pp. 59a.
Meeting Info.: 39th Annual Meeting of the American Society for Cell Biology Washington, D.C., USA December 11-15, 1999
The American Society for Cell Biology
. ISSN: 1059-1524.
DOCUMENT TYPE: Conference
LANGUAGE: English

=> d 11 ibib abs

L6 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:624037 CAPLUS
DOCUMENT NUMBER: 127:306212
TITLE: Mitochondrial complex I defects in aging
AUTHOR(S): Lenaz, Giorgio; Bovina, Carla; Castelluccio, Cinzia; Fato, Romana; Formiggini, Gabriella; Genova, Maria Luisa; Marchetti, Mario; Pich, Milena Merlo; Pallotti,

Francesco; Castelli, Giovanna Parenti; Biagini,
Graziella
CORPORATE SOURCE: Dipartimento di Biochimica 'G. Moruzzi', University
of Bologna, Bologna, Italy
SOURCE: Molecular and Cellular Biochemistry (1997), 174(1&2),
329-333
CODEN: MCBIB8; ISSN: 0300-8177
PUBLISHER: Kluwer
DOCUMENT TYPE: Journal
LANGUAGE: English

AB According to the 'mitochondrial theory of aging' it is expected that the activity of NADH Coenzyme Q reductase (Complex I) would be most severely affected among mitochondrial enzymes, since mitochondrial DNA encodes for 7 subunits of this enzyme. Being these subunits the site of binding of the acceptor substrate (Coenzyme Q) and of most inhibitors of the enzyme, it is also expected that subtle kinetic changes of quinone affinity and enzyme inhibition could develop in aging before an over-all loss of activity would be obsd. The overall activity of Complex I was decreased in several tissues from aged rats, nevertheless it was found that direct assay of Complex I using artificial quinone acceptors may underevaluate the enzyme activity. The most acceptable results could be obtained by applying the 'pool equation' to calc. Complex I activity from aerobic

NADH oxidn.; using this method it was found that the decrease in Complex I activity in mitochondria from old animals was greater than the activity calcd. by direct assay of NADH Coenzyme Q reductase. A decrease of NADH oxidn. and its rotenone sensitivity was obsd. in nonsynaptic mitochondria, but not in synaptic 'light' and 'heavy' mitochondria of brain cortex from aged rats. In a study of Complex I activity in human platelet membranes the authors found that the enzyme activity was unchanged but the titer for half-inhibition by rotenone was significantly increased in aged individuals and proposed this change as a suitable biomarker of aging and age-related diseases.

=> d 11 kwic

L6 ANSWER 11 OF 14 : CAPLUS COPYRIGHT 2002 ACS
IT 9032-21-7, **Nadh oxidase**
RL: BAC (Biological activity or effector, except adverse); BSU
(Biological study, unclassified); BIOL (Biological study)
(NADH oxidn. in brain mitochondria in old and young rats in relation to complex I defects in **age-related** disease)

=> d 12 ibib abs

L6 ANSWER 12 OF 14 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 5
ACCESSION NUMBER: 94220918 EMBASE
DOCUMENT NUMBER: 1994220918
TITLE: L-arginine-nitric oxide pathway and chronic nephropathy in aged rats.
AUTHOR: Sonaka I.; Futami Y.; Maki T.
CORPORATE SOURCE: Central Research Laboratories, Ajinomoto Co., Inc., 214, Maeda-cho, Totsuka-ku, Yokohama 244, Japan

SOURCE: Journals of Gerontology, (1994) 49/4 (B157-B161).
 ISSN: 0022-1422 CODEN: JOGEA3
 COUNTRY: United States
 DOCUMENT TYPE: Journal; Article
 FILE SEGMENT: 005 General Pathology and Pathological Anatomy
 020 Gerontology and Geriatrics
 021 Developmental Biology and Teratology
 LANGUAGE: English
 SUMMARY LANGUAGE: English
 AB Effects of aging and dietary protein on the L-arginine-nitric oxide (Arg-NO) pathway and the progress of chronic nephropathy were examined. At 6-7 months of age, 10 male Fischer 344 rats were fed a 23% protein diet until 24 or 25 months of age, and another 10 were fed a 12% protein diet until that age. Twenty male Fischer 344 rats that were fed the 23% protein diet from 6 to 8 months of age were used as a control. Urinary excretion of nitrite/nitrate (NOx) at the age of 24 months in the 23% protein group was remarkably decreased, whereas in the 12% protein group, urinary NOx remained comparable to that of the control. Histological examination revealed that chronic nephropathy was highly progressive in the 23% protein group, accompanied by lowered renal function, but these changes were obviously suppressed in the 12% protein group. These results suggest that an **age-related** decrease in the synthesis of NO could be associated with the progress of chronic nephropathy.

=> d 13 ibib abs

L6 ANSWER 13 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS
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6
 ACCESSION NUMBER: 1989:454912 BIOSIS
 DOCUMENT NUMBER: BA88:103184
 TITLE: COMPARISON OF HIGH-DOSE OPIOID ANTAGONIST EFFECTS ON OVINE FETAL CARDIOVASCULAR FUNCTION.
 AUTHOR(S): DUNLAP C E III; VALEGO N K; ROSE J C
 CORPORATE SOURCE: DEP. PHYSIOL. PHARMACOL., BOWMAN GRAY SCH. MED., 300 S. HAWTHORNE ROAD, WINSTON-SALEM, N.C. 27103, USA.
 SOURCE: DEV PHARMACOL THER, (1989) 13 (1), 28-37.
 CODEN: DPTHDL. ISSN: 0379-8305.
 FILE SEGMENT: BA; OLD
 LANGUAGE: English
 AB The opioid antagonists, naloxone (NOX) and naltrexone (NTX), were found to produce dose-dependent increases in fetal mean arterial pressure over a dose range of 5-80 mg/kg. There was a concomitant decrease in fetal heart rate up to 40 mg/kg. Above this dose, NOX and NTX caused an increase in heart rate as well as blood pressure. NTX produced similar effects in maternal ewes, although at lower doses (mg/kg) than those needed for fetal lambs. There were no **age-related** differences in antagonist effects in two fetal age groups studied (100-116 and 124-144 days of gestation). The partial antagonist, levallorphan (LVL), produced effects which were qualitatively similar to those produced by NOX and NTX in doses up to 20 mg/kg. These effects were not stereospecific, as the enantiomer of LVL, dextrallorphan, produced similar effects at equal doses. Pretreatment with the .alpha.1-adrenoreceptor antagonist, prazosin, abolished the opioid antagonist effects on fetal blood pressure. We postulate that high doses of opioid antagonists

activate sympathetic systems to increase fetal blood pressure through mechanisms which do not involve interactions with μ , δ , or κ opioid receptors.

=> d 14 ibib abs

L6 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1979:201264 CAPLUS

DOCUMENT NUMBER: 90:201264

TITLE: Function of liver mitochondria of rats of different ages and characteristics of their degradation

AUTHOR(S): Almatov, K. T.; Rakhimov, M. M.

CORPORATE SOURCE: Res. Inst. District Med., Tashkent, USSR

SOURCE: Ontogenez (1979), 10(2), 182-8

CODEN: ONGZAC; ISSN: 0475-1450

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB For mitochondria isolated from the livers of 20-day- to 24-mo-old rats, there were no significant age-related differences in the rate of O uptake during succinate metab. in respiratory states 2, 3, and 4; the

respiratory

control ratio (RCR); or the ADP/O [(ADP phosphorylated)/(O taken up)] ratio under std. conditions. However, during continued incubation, the RCR and ADP/O ratios decreased more rapidly with 20-day-old rat and esp. 24-mo-old rat mitochondria than with the 3-mo-old rat mitochondria. During incubation at 36.degree., the decrease in the mitochondrial succinate oxidase (I), **NADH oxidase** (II), and cytochrome c oxidase activities followed a similar **age-related** pattern. These enzyme activities were also most sensitive to trypsin or phospholipase D treatment in the 24-mo-old rat mitochondria and least sensitive in the 3-mo-old rat organelles. The stimulation of mitochondrial I and II activities by exogenous cytochrome c was greatest for 20-day-old rats; intermediate for 1-, 16-, and 24-mo-old rats; and lowest for 3-mo-old rats. Evidently, the inner mitochondrial membrane is most stable in nonsenescent adult rats.

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
71.87	72.46

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-4.34	-4.34

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